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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/467,611	12/20/1999	GEORGE J. MIAO	INTL-0324-US	2610
21906	7590	11/21/2006	EXAMINER	
TROP PRUNER & HU, PC 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			PERILLA, JASON M	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/467,611

Applicant(s)

MIAO ET AL.

Examiner

Jason M. Perilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 20-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-18 and 20-30 are pending in the instant application.

#### ***Response to Arguments***

2. In view of the appeal brief filed on April 21, 2006, PROSECUTION IS HEREBY REOPENED. A new grounds for rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

#### ***Claim Objections***

3. Claims 1-15, 17, 18, 20-23, and 26-30 are objected to because of the following informalities:

Regarding claim 1, the variable "N" should be defined as an integer greater than 2 to be definite and enabled. Further regarding claim 1, in line 2, "with N bands" should be replaced by –passing N bands—to make the claim definite. Additionally, in line 3, "to

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reject N-1 bands” should be replaced by –to reject one less than the N bands—to make the claim definite. See the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, below.

Regarding claim 6, in line 2, “a transceiver receiving” should be replaced by –the cellular transceiver when receiving--, in line 3, “and said first” should be replaced by –and only said first--, and, in line 4, “the system is receiving” should be replaced by --the cellular transceiver is receiving--.

Regarding claim 9, in line 2, “the coefficients” is lacking antecedent basis.

Regarding claim 10, in line 1, “said memory” is lacking antecedent basis, and, in line 2, “the coefficients” is lacking antecedent basis.

Regarding claim 11, in line 3, “selectively controllable depending on the nature of the cellular system” should be replaced by –selectively controlled depending on the nature of a received signal--.

Regarding claim 13, in line 1, “said controller” is lacking antecedent basis.

Regarding claim 15, “the same anti-aliasing filter” is lacking antecedent basis and, in line 2, “both mode” is indefinite because one skilled in the art is not able to discern which “modes” are being referred to.

Regarding claim 17, in line 2, “said first stage” should be replaced by –said first filter stage--.

Regarding claim 18, “said first stage to filter N bands and said second stage to reject N-1 bands” should be replaced by –said first filtering stage to reject N bands and

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said second stage to reject one less than the N bands--. See the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, below.

Regarding claim 20, in lines 1-2, "said input signal" is lacking antecedent basis, and, in lines 2-3, "is for a Global System for Mobile communications mode or a Wideband Code Division Multiple Access mode" should be replaced by -- is a Global System for Mobile communications signal or a Wideband Code Division Multiple Access signal--.

Regarding claim 21, "the coefficients" is lacking antecedent basis.

Regarding claim 22, in line 1, "the same anti-alias analog filter" is lacking antecedent basis, and, in lines 2-3, "the WCDMA and GSM modes" is lacking antecedent basis.

Regarding claim 23, "the number of taps" is lacking antecedent basis.

Regarding claim 26, in line 1, "the number of taps" is lacking antecedent basis, and, in lines 6-7, "from either a first of two filtering stages or a second of two filtering stages" should be replaced by --from either the first filtering stage or a second filtering stage--.

Regarding claim 27, "the output" is lacking antecedent basis. Further, "a processor-based system" should be replaced by --the processor-based system--.

Regarding claim 28, "the coefficients" is lacking antecedent basis. Further, "a processor-based system" should be replaced by --the processor-based system--.

Regarding claim 29, "the number of taps" is lacking antecedent basis. Further, "a processor-based system" should be replaced by --the processor-based system--.

Regarding claim 30, "the coefficients" is lacking antecedent basis. Further, "a processor-based system" should be replaced by --the processor-based system--. In lines 2-3, "said first stage" and "said second stage" should be replaced by --said first filtering stage—and --said second filtering stage--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 26-30 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 26, the claim is rejected because it is not a process, machine, item of manufacture, composition of matter, or any new and useful improvement thereof. A claim that recites a computer that solely calculates a mathematical formula or a computer disk that solely stores a mathematical formula is not directed to the type of subject matter eligible for patent protection. See MPEP § 2106.

Regarding claims 27-30, the claims are rejected as being based upon a rejected parent claim.

***Claim Rejections - 35 USC § 112***

6. Claims 16-25 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 16, the claim contains subject matter which is not enabled because the specification does not describe, independently, both (1) selectively programming and (2) adapting. Rather, the specification provides for, sequentially, (1) detecting, (2) selectively programming, and (3) selectively using. That is, the use of every step as claimed is not described as being used together in the specification.

Regarding claims 17-25, the claims are rejected as being based upon a rejected parent claim.

7. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-15, and 26-30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the claim is indefinite because, in line 2, the "N bands" of the first filter does not appropriately limit the first filter. That is, one skilled in the art is unable to determine how a filter has "bands". While one skilled in the art determines that a filter may *reject* or *pass* bands, it is unclear to limit a filter to *having* bands. Further regarding claim 1, one skilled in the art is unable to determine which of the first and second filters (or both) is to implement a Global System for Mobile communication mode.

Further regarding claim 1, in line 2, "with N bands" should be replaced by – passing N bands—to make the claim definite. Additionally, in line 3, "to reject N-1 bands" should be replaced by –to reject one less than the N bands—to make the claim definite. As presently claimed, the "N bands" of line 2 and the "N-1 bands" of line 3 have no correspondence, and it makes the claim indefinite and un-enabled. For instance, with respect to the claim language, figure 16 represents a filter rejecting "N-1 bands" although, on its face, the figure illustrates only the rejection of one band (i.e. 490KHz – 3500 KHz). Therefore, the "bands" of the two filters must be related via the use of antecedent basis to make the claim definite and enabled.

Regarding claims 2-4, the claims are rejected as being based upon a rejected parent claim.

Regarding claim 5, the claim is indefinite because claims 2 and 4 limit the first filter to a WCDMA mode although the instant claim attempts to limit the first filter to a GSM mode, and it makes the claim indefinite. One is unable to determine the actual mode of the first filter.

Regarding claim 26, the claim is rejected because, in lines 1-2, one skilled in the art is unable to determine how storing instructions can "cause" a processor-based system to act, and it makes the claim indefinite.

Regarding claims 27-30, the claims are rejected as being based upon a rejected parent claim.

***Claim Rejections - 35 USC § 103***



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9. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Oh et al (U.S. Pat. No. 6279019; hereafter "Oh") in view of Gustafsson et al (U.S. Pat. No. 6385262; hereafter "Gustafsson").

Regarding claim 1, Oh discloses a cellular transceiver (fig. 1) comprising: a first digital filter (fig. 8, ref. 55; "MHBF filter") passing N bands (fig. 15, ref. 253; col. 14, lines 55-65); and a second digital filter (fig. 8, ref. 51) rejecting one less than the N bands (fig. 15, ref. 251) coupled to said first digital decimation filter (col. 14, lines 27-68). As broadly as claimed, the response of Oh's first filter (fig. 15, ref. 253) passes N bands of arbitrary frequency width. Furthermore, the response of Oh's second filter (fig. 15, 251), as broadly as claimed, rejects one less than every N band passed by the second filter because the second filter rejects more frequencies than the first filter. Oh does not disclose that the filters are adapted to implement a Global System for Mobile Communication mode. However, Gustafsson teaches, in a strictly analogous cellular transceiver (fig. 2a) having first and second digital decimation filters (fig. 3b), the adaptation of the filters for various cellular networks including a GSM communications mode (col. 1, lines 15-25). Therefore, as understood by one having ordinary skill in the art, it would have been obvious that the digital decimation filters of Oh could be utilized in a GSM communications mode as taught by Gustafsson because the use of digital

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decimation filters can advantageously aid in the reception of GSM communication signals.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art of record not relied upon above is cited to show the state of the art with respect to digital decimation filters.

U.S. Pat. No. 6584090 to Abdelgany et al.

U.S. Pat. No. 6683919 to Olgaard et al.

U.S. Pub. No. 2005/0245201 to Ella et al.

U.S. Pat. No. 6603812 to Oprescu.

U.S. Pat. No. 7035888 to Lee.

U.S. Pat. No. 6195383 to Wishart et al.

U.S. Pat. No. 5717617 to Chester.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Perilla  
November 14, 2006

jmp

  
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SUPERVISORY PATENT EXAMINER